NON-PUBLIC?: N
ACCESSION #: 8808040088

LICENSEE EVENT REPORT (LER)

FACILITY NAME: Braidwood, Unit 2 PAGE: 1 of 3

DOCKET NUMBER: 05000457

TITLE: Reactor Trip Due to Defective Circuit Card
EVENT DATE: 07/02/88 LER #: 88-018-00 REPORT DATE: 07/21/88

OPERATING MODE: 1 POWER LEVEL: 040

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Joe Doyle, Technical Staff Engineer
TELEPHONE #: 815-458-2801 Ext. 2660

COMPONENT FAILURE DESCRIPTION:
CAUSE: B SYSTEM: JG COMPONENT: PIC* MANUFACTURER: W123
REPORTABLE TO NPRDS: N

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: At 2304 on July 2, 1988, a reactor trip occurred while conducting startup test BwSU NR-75A, Axial Flux Difference Calibration. Per the test procedure, Pressurizer Pressure Channel 455C Bistable was placed in the tripped condition. During the test, Pressurizer Pressure (AB) Bistable 457C failed, completing the 2 out of 4 logic needed for a reactor trip. Post trip response was normal except that bus 243, a non safety related bus, did not auto transfer from the Unit Auxiliary transformer to the system auxiliary transformer. This was done manually by an Equipment Attendant. A feedwater isolation occurred because of the low average temperature and reactor trip. Both auxiliary feedwater pumps auto started because of a LO-LO Level in the Steam Generators (SJ). Conditions were stabilized by 2330. The root cause of the event was the failure of pressurizer pressure bistable 457C in conjunction with pressurizer pressure bistable 455C being in a tripped condition. The failure of the 457C bistable was caused by a failure of the comparator card. Corrective actions included replacing the failed card and to repairing the breaker. There have been no previous occurrences of a reactor trip as the result of a failed bistable card while conducting a startup test.

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(End of Abstract)

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 1; Event Date: July 2, 1988; Event Time: 2304
MODE: 1 - Power Operation; Rx Power: 40%; RCS (AB)
Temperature/Pressure: NOT/NOP

B. DESCRIPTION OF EVENT:

Pressurizer Pressure Channel 455C Bistable had been placed in the tripped condition per the requirements of the startup that was in progress.

Prior to the reactor trip, the Instrument Maintenance Department (IMD) was conducting startup test BwSU NR-75A, Axial Flux Difference Calibration. Per the test prerequisites, pressurizer pressure channel 455C bistable was placed in the test condition. At 2304 pressurizer pressure (AB) bistable 457C failed, and with 2 out of 4 of the pressurizer pressure channels tripped, a reactor trip occurred. Post trip response was normal except that bus 243, a non safety related bus, did not auto transfer from the unit auxiliary transformer to the system auxiliary transformer. An Equipment Operator was sent to do this manually. A feedwater isolation occurred because of the low average temperature and reactor trip. Both Auxiliary Feedwater Pumps auto started because of a LO-LO level in the Steam Generators (SJ). Conditions were stabilized by 2330. No other actions were required.

Operator actions neither increased nor decreased the severity of the event.

The appropriate NRC notification via the ENS Phone System was made at 0043 on July 3, 1988 pursuant to 10CFR50.72(b)(2)(ii).

This event is being reported pursuant to 10CFR50.73(a)(2)(iv) - any event or condition that resulted in manual or automatic actuation of any engineered safety feature, including the reactor protection system.

C. CAUSE OF EVENT:

The critical factor leading to the Reactor Trip was the failure of pressurizer pressure bistable 457C in conjunction with pressurizer pressure bistable 455C being in a tripped condition in accordance with Start-up Test BwSU NR-75A. It takes 2 out of 4 pressurizer pressure

channels being in a tripped condition to cause a Reactor Trip. The failure of the 457C bistable was caused by a failure of the comparator card.

D. SAFETY ANALYSIS:

There was no effect on plant or public safety. The plant reached stable conditions in 30 minutes. Under worst case conditions, of operating at 100% power, the results would have been the same.

E. CORRECTIVE ACTIONS:

Work Request A23995 was written and the failed card was replaced by the Instrument Maintenance Department. Work Request A23974 was written to repair the apparent breaker auto transfer problem. No problems were found with the breaker. It is believed that the breaker was not fully racked in and the contacts were not engaged, thus preventing an auto transfer. The breaker was returned to service.
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E. CORRECTIVE ACTIONS: (cont'd)

The placement of Pressurizer Pressure Bistable 455C into test was required by Start-up Test BwSU NR-75A. The periodic AFD Surveillance does not require placing the 455C loop in test.

This event is considered to be an isolated event. No further corrective actions are required.

F. PREVIOUS OCCURRENCES:

There have been no previous occurrences where a reactor trip has occurred due to a failure of a pressurizer bistable while the axial flux distribution startup test was being performed.

G. COMPONENT FAILURE DATA:

MANUFACTURER NOMENCLATURE MODEL NUMBER MFG PART NUMBER

Westinghouse NAL Card 2837A13G01 A42348
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Commonwealth Edison
Braidwood Nuclear Power Station
Route #1, Box 84
Braceville, Illinois 60407
Telephone 815/458-2801

BW/88-850

July 28, 1988

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73(a)(2)(iv) which requires a 30 day written report.

This report is number 88-018-00; Docket No. 50-457.

Very truly yours,
/s/ K. C. Kofur for
R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/PMB/jab
(7126z)

Enclosure: Licensee Event Report No. 88-018-00
cc: NRC Region III Administrator
NRC Resident Inspector
INPO Record Center
CECo Distribution List

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